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EG&G AND DOE
COMMENTS TO
SELECTION OF EXPOSURE SCENARIOS,
COMPUTER MODELS, AND
DATA COLLECTION REQUIREMENTS

HUMAN HEALTH RISK ASSESSMENTS

ROCKY FLATS PLANT
GOLDEN, COLORADO

PREPARED BY
EG&G ROCKY FLATS

Reviewed For Classification/UCNI

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Date: @ 9/27/90

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD

A-SW-001700

COMMENTS TO
SELECTION OF EXPOSURE SCENARIOS, COMPUTER MODELS, AND
DATA COLLECTION REQUIREMENTS FOR
HUMAN HEALTH RISK ASSESSMENTS

Page 1, Section 1.2:

- Reference current Risk Assessment Guidance.

Page 2, Section 1.2:

- There will not be an OU specific memoranda submitted prior to each Baseline Risk Assessment.

Page 3, Section 2.0:

- References to Dames & Moore should be deleted throughout this document.

Page 5, Section 2.1:

- The reasoning behind choosing the three listed land use scenarios shall be described. Are there any other scenarios that were discounted?
- Are we going to look at onsite workers for being potentially exposed? If so, ensure that: (1) We are consistent with the distance definition and, (2) we address building wake affects.

Page 6, Section 2.1:

- Delete the paragraph concerning the Environmental Evaluation Manual.

Page 7, Section 2.2:

- Why aren't site workers included as potential receptors in the present?
- This paragraph suggests that there are no other models present in this document other than ground water. This is a false statement.
- Are the equations listed in Section 2.2.1 through 2.2.8 inherent in the computer models listed in the rest of the report? If so, this should be explicitly stated. If not, why are these here since we are going to get the computer models approved for use and not the equations?
- Are computer models verified and validated? Are the models based on 50 year committed dose or 70 year dose?

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Page 2

Page 8, Section 2.2.1:

- If these equations are in the "Plan for Prevention of Contaminant Dispersion," why are they also in this document?
- All terms should be explained. Where does the "Annual Average PM10 emission rate," (E), come from?

Page 11, Section 2.2.2:

- Why is 100 meters chosen?

Page 13, Section 2.2.3:

- Talk about how the error associated with the arithmetic mean concentration will be addressed.

Page 18, Section 2.3:

- The specific reasons for choosing the given exposure scenarios in Sections 2.3.1 through 2.3.4 need to be explicitly stated. This will include a thorough explanation of why the disregarded exposure scenarios were not chosen. The discussions are short and incomplete as presented.
- Since there are carcinogens (hazardous and radioactive materials) present at the Operable Units, why aren't population exposures a part of the exposure scenarios?

Page 19, Section 2.3:

- By including the Maximally Exposed Individual (MEI) in this report, are we following current EPA guidance? Is there any reason to keep this scenario in the document?

Page 25, Section 2.3.5:

- This section should be expanded to show what the implications will be for DOE if there are deed restrictions.

Page 26, Section 2.3.5:

- Why don't we just delete the Maximum Exposed Individual from the document?

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Page 3

Page 30, Section 3.1:

- What about including pump back from the Solar Ponds? Is this an isolated case or are there any other places like it?

Table 3-1:

- Why is the computer code "MODFLOW" not included?

Page 43, Section 3.1.2:

- Why is MOC included? It does not fulfill the four criteria.
- Since TARGET is a Dames & Moore ground water model is there sufficient justification for including it in the recommended models?

Page 43, Section 3.1.3:

- Insert the word "may" between "models" and "include".

Page 46, Section 3.1.3:

- Delete the "Boundary Conditions" bullet since other parameters may be a subset of the boundary conditions.

Page 47, Section 3.1.3:

- Please include expected completion dates for gathering required model data.

Table 3-5:

- Is it really realistic to include "Decay/Degradation" data in this table? How would this really be figured?

Page 50, Section 3.2:

- What is meant by "The long term evaluation would require continuous simulation of the rainfall-runoff and contaminant transport processes"?

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Page 4

Page 52, Section 3.2.1:

- In the third bullet, "Surface Water Flow Simulation," are one dimensional models examined?

Table 3-8:

Talk with Jim Langman or Pete Folger about current sediment sizes at the Rocky Flats Plant. I believe that there is data for the plant.

Page 69, Section 3.2.3:

- Where can dispersion, decay, reaction and degradation coefficients be found and why are they so important to the models chosen?

Page 82, Section 3.3.3:

- Do we or don't we need to develop wind field descriptions?

Page 83, Section 3.4:

- Sentence on Synergism should read, "Synergistic effects should also be considered and discussed."

Page 86, Section 3.4.2.1:

- Are any potential scenarios at the Rocky Flats Plant not covered by PATHRAE?

Page 100, Section 3.4.4:

- Please list all codes that would be relevant in each of the two listed computer codes.
- Why is only one biotic pathway code recommended for use with non radioactive (hazardous) constituents?

Table 3-10:

- Why isn't the MAACS code included?